What is claimed is:

1. A fabrication method of a semiconductor integrated circuit device comprising the steps of:

(a) forming a board;

(b) mounting semiconductor chips over the board;

(c) arranging the board over which the semiconductor chips are mounted over a mold surface of a mold for resin molding and, thereafter, closing the mold; and

(d) setting depths of air vents communicating with cavities of the mold to a fixed value and filling sealing resin in the inside of the cavities.

2. A fabrication method of a semiconductor integrated circuit device according to claim 1, wherein the board is a multilayered printed wiring circuit board.

3. A fabrication method of a semiconductor integrated circuit device according to claim 2, wherein a plurality of the multilayered printed wiring circuit boards are prepared in the step (a) and the mold is closed after the plural multilayered printed wiring circuit boards are arranged over a mold surface of one mold in the step (c).

4. A fabrication method of a semiconductor integrated circuit device according to claim 2, wherein a core member of the multilayered printed wiring circuit board is formed of resin.

5. A fabrication method of a semiconductor integrated

circuit device comprising the steps of:

(a) preparing a multilayered printed wiring circuit board over which a plurality of device forming regions respectively having chip mounting portions are formed in a matrix array;

(b) mounting semiconductor chips on the chip mounting portions of the multilayered printed wiring circuit board;

(c) arranging the multilayered printed wiring circuit board over which semiconductor chips are mounted on a mold surface of mold for resin molding and, thereafter, closing the mold by collectively covering the plural device forming regions of the multilayered printed wiring circuit board with one cavity of the mold;

(d) setting depths of air vents communicating with the cavity of the mold to a fixed value and, thereafter, filling sealing resin in the inside of the cavity; and

(e) dividing the multilayered printed wiring circuit board into pieces corresponding to the device forming regions after completion of the step (d).

6. A fabrication method of a semiconductor integrated circuit device according to claim 1, wherein the depths of the air vents are set to the fixed value by pushing the board to the mold surface using movable pins which are formed so as to project into the air vents formed in the mold.

7. A fabrication method of a semiconductor integrated

circuit device according to claim 6, wherein a groove is formed in a distal end of each movable pin so as to leak air inside the cavity to the outside of the cavity through the groove of the movable pin when the resin is filled into the cavity.

8. A fabrication method of a semiconductor integrated circuit device according to claim 6, wherein rammers which make the movable pins project to the air vent side when the mold is released are mounted on the mold, and the movable pins are made to project to the air vent side by the rammers at the time of releasing the mold.

9. A fabrication method of a semiconductor integrated circuit device according to claim 6, wherein the movable pins are made to project to the air vent side by being pushed by a pressure of springs.

10. A fabrication method of a semiconductor integrated circuit device according to claim 9, wherein the pressure of the springs is set far smaller than a clamping force of the mold.

11. A fabrication method of a semiconductor integrated circuit device according to claim 1, wherein a plurality of air vents are formed in the mold, and depths of the respective air vents are set to a fixed value at the time of filling resin.

12. A fabrication method of a semiconductor integrated circuit device according to claim 11, wherein the movable pins are mounted in the plural air vents and the depths of the air vents are set to a fixed value using the respective movable pins.

13. A fabrication method of a semiconductor integrated circuit device according to claim 1, wherein depths of the movable pins in the air vents at the cavity side are greater than the depths of the movable pins at the outside thereof.

14. A fabrication method of a semiconductor integrated circuit device according to claim 1, wherein a pin diameter of the movable pins is set larger than a vent width of the air vents at the cavity side of the movable pin.

15. A fabrication method of a semiconductor integrated circuit device according to claim 1, wherein the air vents and movable pins which project into the air vents are formed in any one of a first mold and a second mold of the mold, and the depths of the air vents are set to a fixed value by pushing the board toward the mold surface using the movable pins.

16. A fabrication method of a semiconductor integrated circuit device according to claim 1, wherein the air vents and movable pins which project into the air vents are formed in any one of a first mold and a second mold of the mold, and, at the time of performing resin molding, a film is arranged over a mold surface of a mold over which the movable pins are arranged, the film is made to follow a shape of the air vents and a shape of distal ends of the movable pins by sucking the film through suction holes formed in the mold, thereby setting the depths of the air vents to a fixed value.

17. A fabrication method of a semiconductor integrated

circuit device comprising the steps of:

(a) preparing a plurality of multilayered printed wiring circuit boards over which a plurality of device forming regions respectively having chip mounting portions are formed in a matrix array;

(b) mounting semiconductor chips on the chip mounting portions of the multilayered printed wiring circuit boards;

(c) arranging the multilayered printed wiring circuit boards over which semiconductor chips are mounted on a mold surface of mold for resin molding and, thereafter, closing the mold by collectively covering the plural device forming regions of the plural multilayered printed wiring circuit boards with respective one of a plurality of cavities of the mold;

(d) setting depths of air vents communicating with the plural cavities of the mold to a fixed value and, thereafter, filling sealing resin in the inside of the cavities; and

(e) dividing the plural multilayered printed wiring circuit boards into pieces corresponding to the device forming regions after completion of the step (d).

18. A fabrication method of a semiconductor integrated circuit device comprising the steps of:

(a) preparing a board;

(b) mounting semiconductor chips on the board;

(c) arranging the board over which the semiconductor chips are formed on a mold surface of a mold for resin molding

and, thereafter, closing the mold; and

(d) filling sealing resin in the inside of a cavity formed in the mold by setting the depths of air vents communicating with the cavity formed in the mold irrespective of a thickness of the board.

19. A fabrication method of a semiconductor integrated circuit device comprising the steps of:

(a) preparing a multilayered printed wiring circuit board over which a plurality of device forming regions respectively having chip mounting portions are formed in a matrix array;

(b) mounting semiconductor chips on the chip mounting portions of the multilayered printed wiring circuit board;

(c) arranging the multilayered printed wiring circuit board over which semiconductor chips are mounted on a mold surface of mold for resin molding and, thereafter, closing the mold by collectively covering the plural device forming regions of the multilayered printed wiring circuit board with one cavity of the mold by way of a sheet;

(d) setting depths of air vents communicating with the cavity of the mold to a fixed value and, thereafter, filling sealing resin in the inside of the cavity; and

(e) dividing the multilayered printed wiring circuit board into pieces corresponding to the device forming regions after completion of the step (d).

20. A fabrication method of a semiconductor integrated circuit device according to claim 19, wherein a sheet is interposed between a chip mounting side of the multilayered printed wiring circuit board and the mold which faces the chip mounting side surface of the multilayered printed wiring circuit board.